

IN THE CLAIMS:

Please cancel Claims 13, 28-38, 47, 67, 80-82, 85 and 90-94. ✓ ✓

Please amend Claims 1, 14, 15, 39, 46, 48-50, 78-79, 83-84 and 88 as follows:

1. (Amended) A microelectronic spring structure, comprising:

a substrate;

a beam, having a base portion, a cantilevered portion extending from said base portion, and a tip portion adjoining said cantilevered portion at an end thereof opposite to said base portion, said beam secured to said substrate at said base portion;

an elongate post component between said substrate and said beam, whereby said beam is spaced apart from and secured to said substrate, said post component comprised of a wire core coated with a structural material; and

a protruding member mounted to said substrate, and disposed under said cantilevered portion of said beam spaced apart from said tip portion;

wherein said microelectronic spring structure is reversibly deflectable between an undeflected position wherein the protruding member does not contact said beam, and a deflected position wherein said protruding member contacts said cantilevered portion of said beam at a position spaced apart from said tip portion.

14. (Amended) The microelectronic spring structure of Claim 1, wherein said post component comprises a column element.

15. (Amended) The microelectronic spring structure of Claim 1, wherein said post component comprises a group of column elements.

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39. (Amended) A microelectronic spring structure, comprising:
a substrate;
a beam, having a base portion, a cantilevered portion extending from said base portion, and a tip portion adjoining said cantilevered portion at an end thereof opposite to said base portion, said beam secured to said substrate at said base portion; wherein said beam is mounted to said substrate and said cantilevered portion thereof extends away from said substrate; and
a protruding member mounted to said substrate, and disposed under said cantilevered portion of said beam, said protruding member comprising a wire core bonded to said substrate and encased in a structural material;
wherein said microelectronic spring structure is reversibly deflectable between an undeflected position wherein the protruding member does not contact said beam, and a deflected position wherein said protruding member contacts said beam.

46. (Amended) The microelectronic spring structure of Claim 39, wherein said protruding member comprises a column, said column having a first end attached to said substrate, and a second end disposed under said beam above said substrate.

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48. (Amended) A microelectronic spring structure, comprising:
a substrate;

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(b7) a beam, having a base portion, a cantilevered portion extending from said base portion, and a tip portion adjoining said cantilevered portion at an end thereof opposite to said base portion, said beam secured to said substrate at said base portion;

a protruding member connected to said beam, and disposed under said cantilevered portion of said beam; and

a tip structure for contacting a terminal of an electronic component, said tip structure mounted to and disposed above a surface of said beam opposite to said substrate;

wherein said microelectronic spring structure is reversibly deflectable between an undeflected position wherein the protruding member does not contact said substrate, and a deflected position wherein said protruding member contacts said substrate and said tip structure is reverse wiped.

49. (Amended) The microelectronic spring structure of Claim 48, wherein said tip structure is located at a position intermediate between said base portion and said tip portion.

50. (Amended) The microelectronic spring structure of Claim 48, wherein said tip structure is mounted to said tip portion of said beam.

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78. (Amended) A microelectronic spring structure, comprising:
a substrate;
a beam, having a base portion, and a cantilevered portion extending from said base portion, said beam secured to said substrate at said base portion; and
an adjustable pressure device disposed under said beam, wherein said adjustable pressure device comprises a mechanical actuator.

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beam

79. (Amended) The microelectronic spring structure of Claim 78, wherein said beam further comprises a free end distal from said base portion, said free end being reversibly deflectable perpendicularly towards said substrate through a first elastic range, and wherein said adjustable pressure device is reversibly compressible perpendicularly towards said substrate through a second elastic range no less than half of said first elastic range.

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83. (Amended) The microelectronic spring structure of Claim 78, wherein said mechanical actuator comprises an elastic membrane enclosing a fluid.

84. (Amended) The microelectronic spring structure of Claim 78, wherein said mechanical actuator comprises an elastic membrane enclosing a fluid.

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88. (Amended) The microelectronic spring structure of Claim 86, wherein said post component comprises a column element, said column element comprised of a wire core coated with a structural material.

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